Super High Expansion Ratio Reflector for Picosat Antennae

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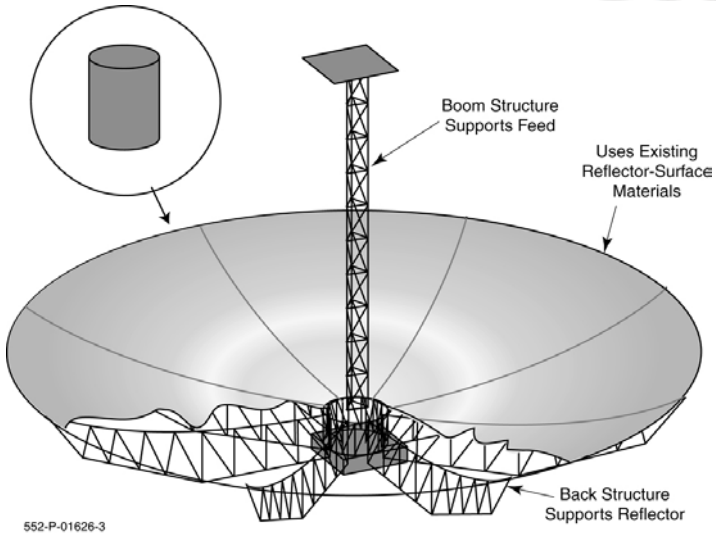
Description and Objectives

-Future NASA Nanosat missions will require low mass, high packaging efficiency, deployable structures to stow into very small volumes

-SHERRPA will utilize sparsely formed composites to achieve ultra-high packing efficiencies for these applications

-Foster-Miller will demonstrate feasibility of using thin members of flexible composite materials as a means of providing high expansion, ultra-light deployed reflectors for Nanosats



Approach

-Adapt previously developed composite technology to the requirements of the Nanosat-scale missions

-Build and test prototype reflector structure during Phase I

-Engineer, construct, and test protoype with space flight quality materials and assembly practices during Phase II

Subcontractors/Partners

-AeroAstro Corporation

-University of Colorado at Boulder

-Northrop Grumman

Schedule and Deliverables

-Prototype fabrication to be completed by Dec 01

-Stow/Deployment testing to be completed by Mar 02

NASA & Commercial Applications

-Nanosat missions such as Trailblazer

-Solar arrays, linear antennae, radiators, solar sails

-Terrestrial applications - portable field communications antennae